



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,420	09/15/2005	Keun Hyung Yoo	2017-25	9465

52706 7590 09/12/2006

IPLA P.A.  
3580 WILSHIRE BLVD.  
17TH FLOOR  
LOS ANGELES, CA 90010

EXAMINER

LOPEZ, FRANK D

ART UNIT PAPER NUMBER

3745

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/549,420

Applicant(s)

YOO, KEUN HYUNG

Examiner

F. Daniel Lopez

Art Unit

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/15/05</u>   | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 3745

***Claim Rejections - 35 USC § 112***

Claims 1-4 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 line "a rotating axis" is confusing, since an axis is an imaginary line; perhaps applicant is trying to claim a shaft. In claim 1 line 2 "along the piston 160" should be --along the guide--.

In claim 3 line "vertically" should be --perpendicular--. In claim 3 line "guide 211" should be --slider--.

Claims not specifically mentioned are indefinite, since they depend from one of the above claims.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claim 1, inasmuch as it is definite, is rejected under 35 U.S.C. § 103 as being unpatentable over Tyler in view of Stoll et al. Tyler discloses an actuator comprising a piston (2) dividing a cylinder (1) into first and second spaces, connected to a rotating shaft by a power transmission (column 1 line 29-34) and having a reciprocal direction of motion along a first axis; wherein a solenoid valve (10) is connected to the first and second spaces; wherein a guide is provided on one side of the cylinder, guiding a slider (21) and position sensor (18, LS2) in motion parallel to the first axis; a working rod (20)

Art Unit: 3745

connecting the slider to the position sensor; and a scale (24) representing displacement of the sensor; but does not disclose that the sensor is a magnetic sensor, adjacent the wall of the cylinder, with a magnet on one side of the piston.

Stoll et al teaches, for an actuator comprising a piston (6) dividing a cylinder (2) into first and second spaces, and having a reciprocal direction of motion along a first axis; wherein a solenoid valve (10) is connected to the first and second spaces; wherein a guide (e.g. 42) is provided on one side of the cylinder, guiding a position sensor (17); that the sensor is a magnetic sensor, adjacent the wall of the cylinder, with a magnet (16) on one side of the piston.

Since the position sensors of Tyler and Stoll et al are interchangeable in the piston position sensor art, it would have been obvious at the time the invention was made to one having ordinary skill in the art to replace the position sensor of Tyler with a magnetic sensor, adjacent the wall of the cylinder, with a magnet on one side of the piston, as taught by Stoll et al, as a matter of engineering expediency.

A limitation that a rotating shaft extends out of the cylinder is not considered part of the claimed limitations, due to the 112 rejection. If it was, there are references that show the shaft extending out of the cylinder, so it would not be allowable.

### ***Conclusion***

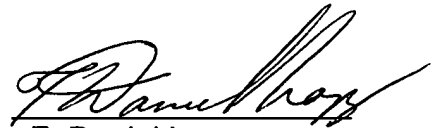
Claims 3 and 4 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, second paragraph, set forth in this Office action.

Claim 2 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is 571-272-4821. The examiner can normally be reached on Monday-Thursday from 6:15 AM -3:45 PM. The examiner can also be reached on alternate Fridays.

Art Unit: 3745

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on 571-272-4820. The fax number for this group is 571-273-8300. Any inquiry of a general nature should be directed to the Help Desk, whose telephone number is 1-800-PTO-9199.

A handwritten signature in black ink, appearing to read "F. Daniel Lopez", with a stylized flourish at the end.

F. Daniel Lopez  
Primary Examiner  
Art Unit 3745  
September 5, 2006